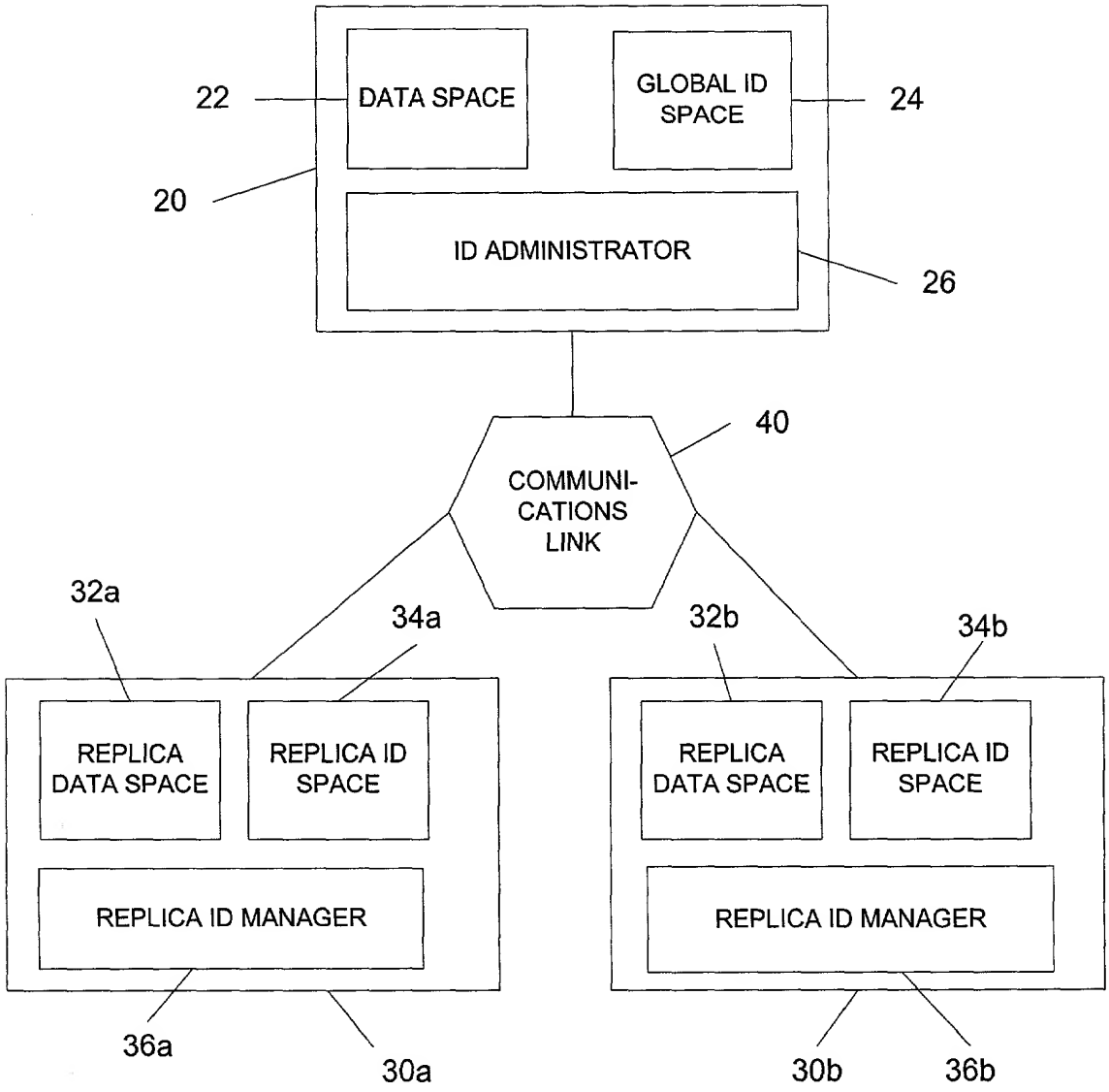
22
DATA SPACE
GLOBAL ID SPACE
24
20
ID ADMINISTRATOR
26
40
COMMUNI-CATIONS LINK
32a
34a
32b
34b
REPLICA DATA SPACE
REPLICA ID SPACE
REPLICA DATA SPACE
REPLICA ID SPACE
REPLICA ID MANAGER
REPLICA ID MANAGER
36a
30a
30b
36b

FIG. 1

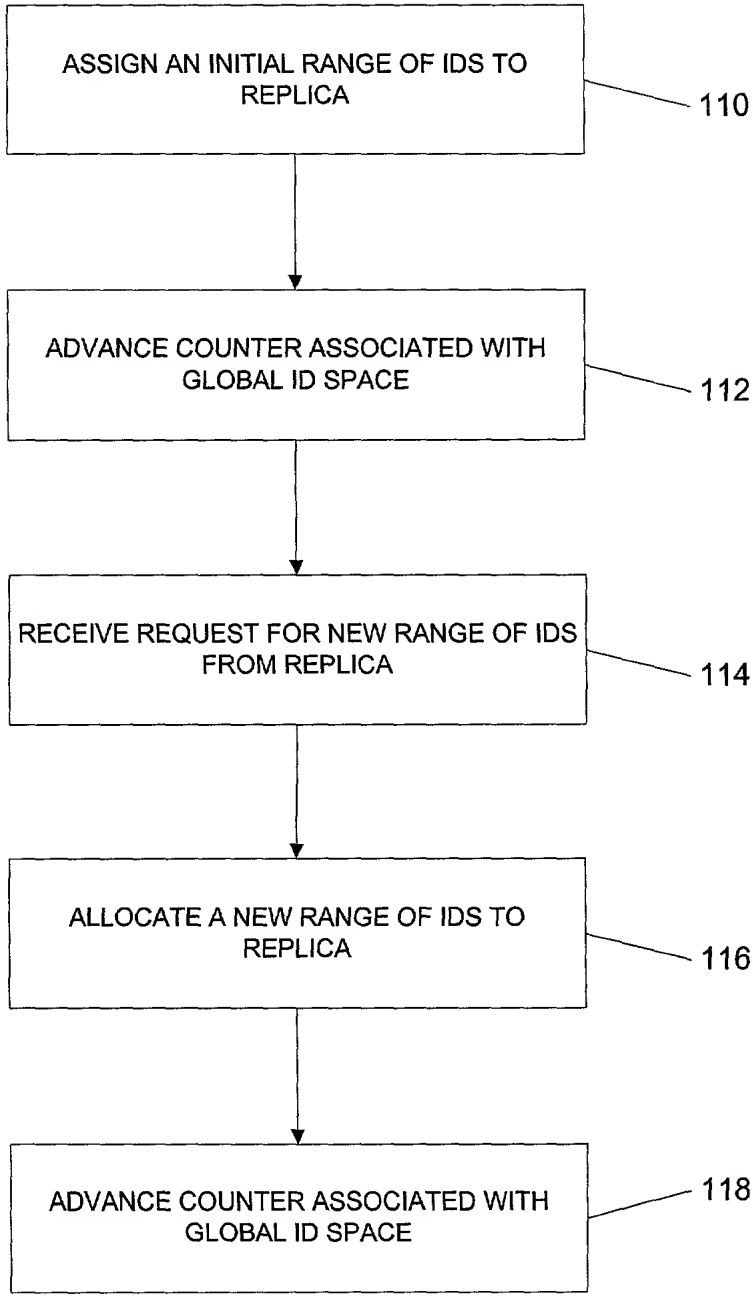
ASSIGN AN INITIAL RANGE OF IDS TO REPLICA
110
ADVANCE COUNTER ASSOCIATED WITH GLOBAL ID SPACE
112
RECEIVE REQUEST FOR NEW RANGE OF IDS FROM REPLICA
114
ALLOCATE A NEW RANGE OF IDS TO REPLICA
116
ADVANCE COUNTER ASSOCIATED WITH GLOBAL ID SPACE
118

FIG. 2

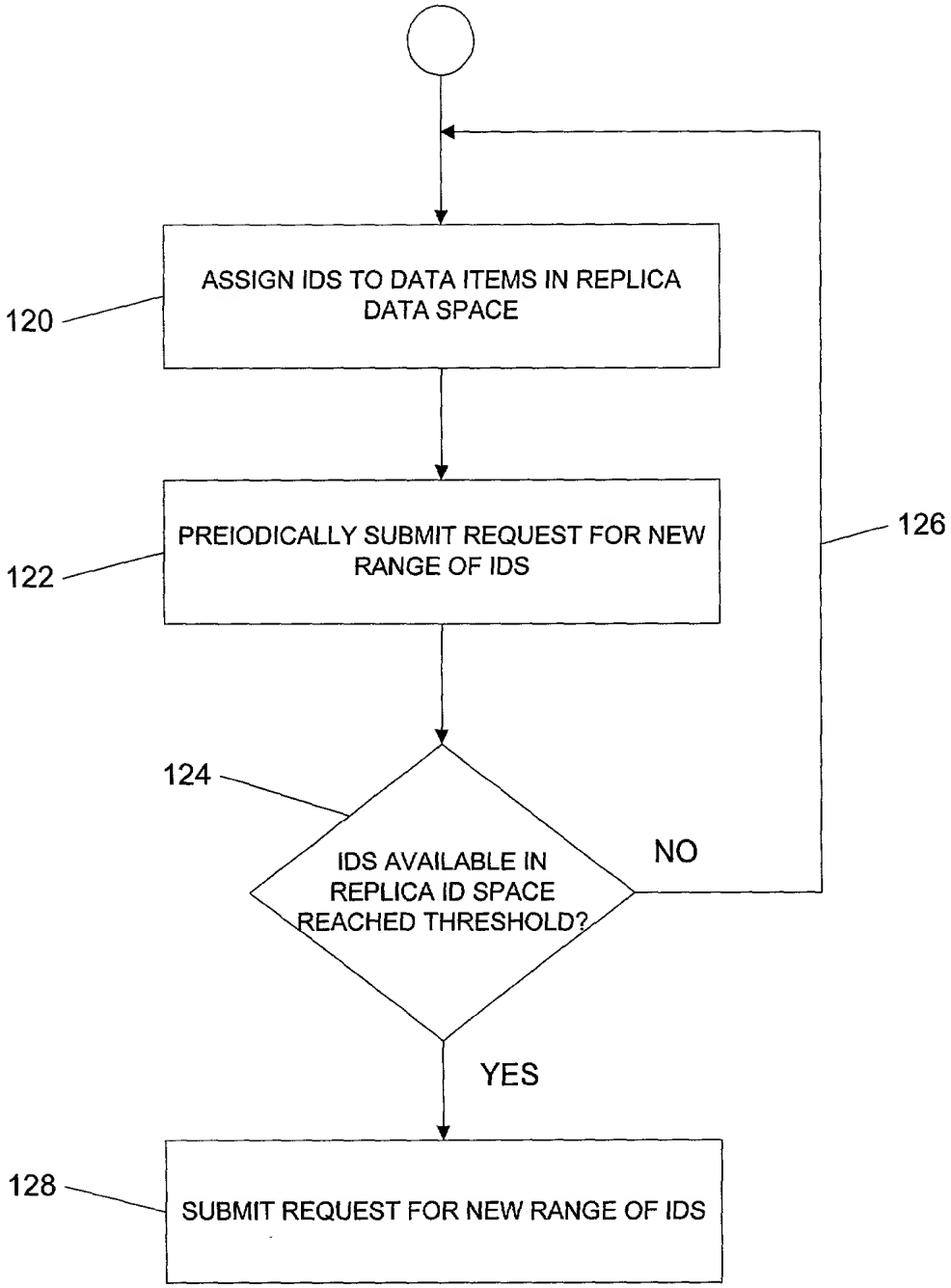
ASSIGN IDS TO DATA ITEMS IN REPLICA DATA SPACE
120
PREIODICALLY SUBMIT REQUEST FOR NEW RANGE OF IDS
122
126
124
IDS AVAILABLE IN REPLICA ID SPACE REACHED THRESHOLD?
NO
YES
128
SUBMIT REQUEST FOR NEW RANGE OF IDS

FIG. 3

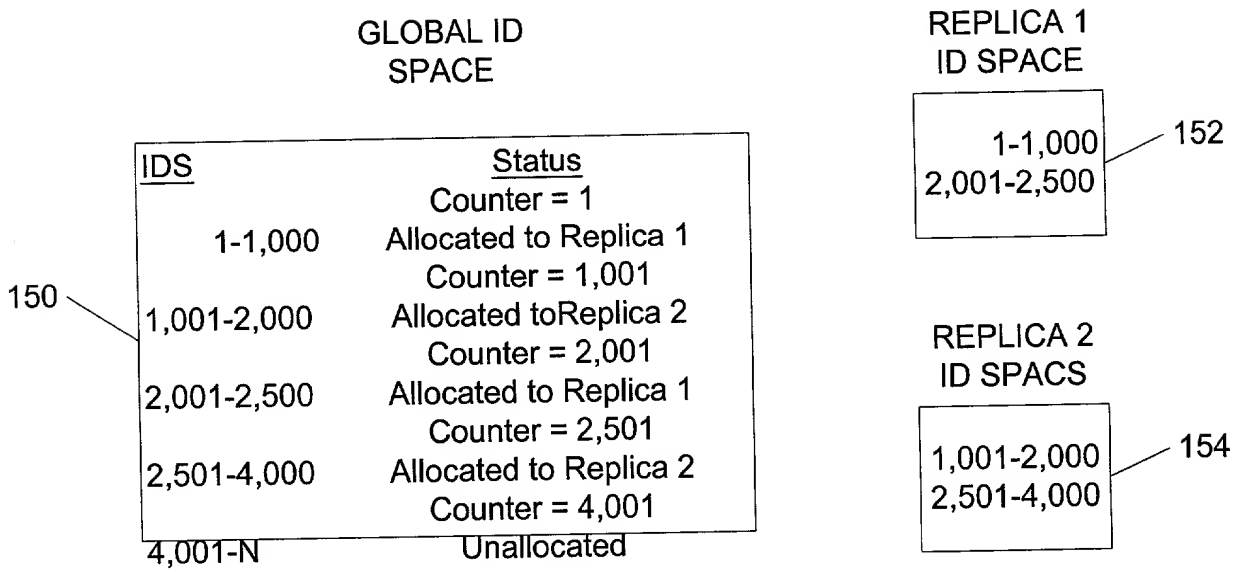
GLOBAL ID SPACE
IDS
Status
1-1,000
Counter = 1
Allocated to Replica 1
1,001-2,000
Counter = 1,001
Allocated toReplica 2
2,001-2,500
Counter = 2,001
Allocated to Replica 1
2,501-4,000
Counter = 2,501
Allocated to Replica 2
4,001-N
Counter = 4,001
Unallocated
150
REPLICA 1 ID SPACE
1-1,000
2,001-2,500
152
REPLICA 2 ID SPACS
1,001-2,000
2,501-4,000
154

FIG. 4